

VII. *On some Phytophagous Coleoptera (Eumolpidæ) from the Islands of Mauritius and Réunion.* By MARTIN JACOBY, F.E.S.

[Read February 2nd, 1898.]

Monsieur Charles Alluaud of Paris, who spent some weeks in the Islands of Mauritius and Réunion, has kindly submitted to me the Phytophaga he obtained at these places. Some of the species appear to be new to science, and of these I here give the descriptions. But few species from these localities are known at present, and in some instances those which have been described have remained doubtful as to their proper genera, and are wrongly placed in Catalogues.

Those dealt with in this paper all belong to the Eumolpidæ, and it is certainly remarkable that so many different species of one family should be found in such small and isolated localities, a fact which scarcely agrees with Wallace's theories with regard to island faunas; the genus *Trichostola* however is not confined to these islands but is represented in Africa.

The insects described here were obtained at Carepipe in the centre of Mauritius at a height of about 1000 feet, and in the Plaine des Palmistes in the Réunion mountains at an elevation of 3000 feet.

Trichostola (Acis) vestita, Boh.

Among the Phytophagous Coleoptera described by Boheman in the "*Eugenies Resa*" the present species is one of which the genus has been doubtful and was not known to Chapuis or Lefèvre. The latter writer placed it in *Colasposoma* Cast., which is rather remarkable, since no form of such small size has ever been known of this genus, in species of which a dense pubescence is very uncommon. Curiously enough, Chapuis has described, or rather diagnosed, another *Trichostola* from the same locality

under the same specific name; as Boheman's name has priority, that of Chapuis cannot remain and I alter it therefore to *Trichostola chapuisi*. This species is described as being flavo-ferruginous, so that it has nothing to do with any of those in the present paper.

Through the kindness of Dr. Aurivillius of the University Museum at Stockholm, I have been enabled to examine Boheman's types, both of *Acis vestita* and *Colaspis puberula*, from the island of Mauritius.

With respect to the first-named species, the type seems different from any of the forms obtained by Mons. Alluaud and described here; it is a true *Trichostola* and has nothing to do with *Colasposoma*. The entire upper surface is densely clothed with pale fulvous pubescence, through which the punctuation can only be seen with difficulty. Boheman gives the colour as "cupreus-æneus," but the specimen sent to me by Dr. Aurivillius is nearly black excepting the shoulders; the punctuation of the head is not distinguishable owing to the pubescence; the antennæ extend rather beyond the middle of the elytra, the first five joints being flavous, the rest fuscous and thickened; the thorax is twice as broad as long, narrowed in front, with strongly rounded sides, its punctuation is again indistinguishable, or extremely fine where traces are visible; that of the elytra consists of closely-placed large punctures, arranged in very close longitudinal striæ; the interstices are clothed with pale pubescence arranged in rows, to the number of about twelve, the shoulders and the sides showing a distinct metallic brassy gloss; the underside is darker obscure-æneous and the legs are fulvous. The length of the insect is $1\frac{3}{4}$ millim.

Trichostola (Colaspis) puberula, Boh.

This species is much larger than the preceding one (measuring nearly 3 millim. in length), of dark æneous colour. The head is remotely and finely punctured (sparingly pubescent in the specimen before me), the labrum is fulvous; the antennæ are robust, nearly black, the lower three joints dark fulvous, the third and fourth joints equal. The thorax is strongly transverse, widened at the middle, with strongly rounded sides and close and very strong punctuation, which distinguishes this species

at once from any other of the genus; the interstices are also pubescent, but the specimen seems rather rubbed. The elytra are greenish-cupreous, with a distinct basal depression, and deep and closely-placed punctures in rather regular rows; the interstices have some small punctures here and there and are clothed with fulvous pubescence, rather long and somewhat sparsely distributed in the specimen before me, showing the metallic cupreous-ground colour distinctly; the sides are of a more greenish tint. Underside and legs as in the preceding species.

The thorax in this insect is less narrowed in front than in *T. vestita* and the punctuation is very strong and close; the elytra are also distinctly broader at the base than the thorax, with the shoulders rather projecting, a feature which distinguishes the species at once from any of its allies.

Trichostola aurata, sp. n.

Below black, above reddish-cupreous, clothed with fulvous pubescence, antennæ and legs fulvous; head and thorax finely and closely punctured; elytra finely punctate-striate.

Length, 2—3 millim.

Head closely covered with long fulvous pubescence, very finely punctured, the epistome not separated from the face, labrum and palpi fulvous; antennæ extending nearly to the middle of the elytra, fulvous, the terminal joints gradually and slightly thickened, each joint stained with fuscous at the extreme apex, the third joint as long as the following ones. Thorax twice as broad as long, the sides rounded, the anterior portion rather strongly deflexed at the sides and very obsoletely transversely depressed, the surface clothed like the head with long fulvous pubescence directed towards the base, scutellum covered with long whitish hairs. Elytra a little wider at the base than the thorax, with a slight transverse basal depression, finely but distinctly punctate-striate, pubescent like the other parts. Underside black, sparingly clothed with grey pubescence, legs entirely fulvous; prosternum very broad.

Hab. MAURITIUS, Carepipe.

This little species is at once distinguished by the bright metallic reddish-cupreous colour, and by the fulvous, and not grey, pubescence of the upper surface, which nearly obscures all punctuation except that of the elytra.

Trichostola striatipennis, sp. n.

Greenish-æneous, clothed with fulvous pubescence, below black, the basal joints of the antennæ, and the legs fulvous; thorax extremely finely and closely punctured; elytra with strongly punctured striæ, the interstices finely and sparingly punctured, slightly convex.

Length, 2 millim.

Clothed, like the preceding species, over all the upper surface with fulvous pubescence, obscuring the punctuation of the head and thorax; the labrum and the lower four joints of the antennæ fulvous, the other joints black and strongly thickened. Thorax about twice as broad as long, sides rounded and strongly deflexed anteriorly, punctuation very fine and close. Elytra strongly convex, rather pointed posteriorly, cupreous or metallic greenish, like the head and thorax, with closely-approximate and strongly punctured striæ, interstices slightly raised and finely punctured, basal depression absent. Legs entirely fulvous.

Hab. MAURITIUS.—RÉUNION, Plaine des Palmistes.

It is with some doubt that I separate this species from *T. vestita*, to which it is at all events closely allied; but all the specimens obtained by Mons. Alluaud are much larger and more pointed posteriorly, the pubescence is of a more decided fulvous colour and the punctures of the elytra are large and closely placed in striæ, the interstices slightly convex throughout.

At first sight the insect appears to be double the size of *T. vestita* on account of its much greater breadth and length, and the elytral punctuation is distinctly visible in spite of the pubescence.

Trichostola variegata, sp. n.

Below obscure fulvous, above obscure cupreous, the basal three joints of the antennæ and the legs fulvous; head and thorax closely punctured and pubescent; elytra with basal depression, strongly punctate-striate, the interstices slightly convex, with long pubescence the disc cupreous, the sides greenish.

Length, 2 millim.

At once separable from the other species described here by the very distinct elytral depression. Head finely rugosely punctate, cupreous and clothed with grey pubescence, eyes large, labrum

fulvous; antennæ long and slender, extending beyond the middle of the elytra, fuscous, the lower three joints fulvous, the third joint shorter than the fourth, the terminal six joints very little thickened, elongate. Thorax twice as broad as long, the sides rounded at the middle and deflexed anteriorly, where there is a distinct transverse depression at the sides; surface with similar sculpture to that of the head and equally pubescent, sides greenish, disc cupreous, the posterior margin nearly straight. Scutellum broad, densely pubescent. Elytra clothed with long greyish pubescence, which in well-preserved specimens forms a small and more conspicuous patch at the middle, the punctures large and rather closely placed, the interstices impunctate.

Hab. MAURITIUS, Carepipe.

This species is less convex than the others here described, a feature caused by the sub-basal elytral depression; the thorax has likewise a rather shallow but distinct depression anteriorly, and in some well marked specimens the elytra are coppery at the disc and metallic-green at the sides. I cannot refer this insect to Chapuis's *T. vestita*, which is described, as mentioned before, as flavo-ferruginous. The totally inadequate diagnosis of three lines proves again the utter absurdity of such descriptions as soon as closely allied species become known; such work ought to be ignored altogether.

Trichostola alluaudi, sp. n.

Obscure piceous with æneous gloss, closely pubescent, the basal joints of the antennæ fulvous; thorax extremely minutely and closely punctured; elytra finely and closely punctate-striate, the interstices minutely punctured and closely pubescent, legs dark æneous.

Length, 3 millim.

Of broadly rounded shape, the head not perceptibly punctured, closely covered with grey pubescence, epistome not separated from the face, labrum fulvous, palpi piceous; antennæ extending to within a short distance from the apex of the elytra, piceous, the lower four or five joints fulvous, the third joint longer than the second but shorter than the fourth, the rest elongate and slender. Thorax rather more than twice as broad as long, the sides strongly rounded, surface very finely and closely punctured, closely covered with long grey pubescence. Scutellum subpentagonal, pubescent. Elytra dark æneous, shading gradually to fulvous at the sides and

shoulders (only visible when viewed sideways), closely and finely punctate-striate, the interstices also very finely punctured and closely covered with long greyish hairs. Legs piceous, femora unarmed, claws bifid.

Hab. MAURITIUS, Carepipe.

Of very convex and broad shape, and at once distinguished by the nearly black legs.

TRICHOSTOLA, Chap.

The species described and referred to in this paper may perhaps be more easily separated by the following table.

Elytra with a distinct sub-basal transverse depression.

Thorax very coarsely punctured: upper surface æneous *puberula*, Boh.

Thorax finely punctured.

Elytral pubescence not arranged in patches: upper surface reddish-cupreous *aurata*, sp. n.

Elytral pubescence arranged in patches: upper surface variegate *variegata*, sp. n.

Elytra without distinct sub-basal transverse depression.

Legs fulvous.

Elytra finely punctured throughout, the interstices flat; upper surface densely pubescent: length $1\frac{3}{4}$ mm. *vestita*, Boh.

Elytra with strongly punctured striae, the interstices convex and finely punctured: length 2 mm. *striatipennis*, sp. n.

Legs black: length 3 mm. *alluaudi*, sp. n.

Ivongius mauriticæ, sp. n.

Fulvous, terminal joints of the antennæ and the legs partly piceous; thorax very sparingly punctured, nearly black; elytra with regular rows of punctures diminishing posteriorly, a spot at the sides, another near the scutellum, and the posterior portion to a greater or smaller extent, blackish-æneous, the rest fulvous; femora unarmed.

Length, 3—4 millim.

Head blackish, vertex with a few punctures, eyes very large with a more or less distinct fulvous mark at their inner margins, clypeus broad, separated from the face by a transverse groove, the sides

rather acutely raised into sharp edges, surface somewhat strongly punctured, labrum and palpi fulvous; antennæ long and slender the lower six and the base of the following joints fulvous, the second joint nearly as long as the third but much thicker, the others very elongate, slightly thickened. Thorax about one-half broader than long, the sides nearly straight, scarcely narrowed in front, the disc blackish with a slight æneous gloss, more or less marked with fulvous near the margins, with a few fine punctures, irregularly distributed. Scutellum broad, blackish, impunctate. Elytra slightly wider than the thorax, with a distinct transverse depression below the base, strongly punctate anteriorly, the punctures gradually diminishing towards the apex, the interstices smooth and impunctate, the ground-colour fulvous, an oblique spot from the middle of the base towards the scutellum, a smaller spot at the lateral margin below the shoulders, and a large subtriangular patch, occupying nearly the entire posterior portion and sending off a branch anteriorly to the lateral margins, blackish. Underside and legs fulvous, the femora stained with black at the apex, unarmed; prosternum broad and impunctate.

Hab. MAURITIUS, Carepipe.

This insect, on account of the deeply emarginate tibiæ, bifid claws and strongly convex anterior margin of the prothoracic episternum, approaches the group of *Typophorinæ* but does not entirely conform to any genus which is placed in it, as its femora are all unarmed. In this it agrees with *Liniscus*, Lef., and *Ivongius*, but in the first-named genus the prosternum is constricted at the middle, and *Ivongius* contains species of small size and different shape. Nevertheless the structural characters of the present species are those of the last-named genus, while the shape is that of *Typophorus* or *Syagrus*; the present insect varies considerably in the amount of fulvous or black colour, one or the other predominating.

Nossiæcus lateralis, sp. n.

Oblong, fulvous, the apical joints of the antennæ black; head and thorax impunctate; elytra strongly punctate-striate, the apex nearly impunctate, fulvous, the sides broadly piceous or fuscous; femora unarmed, claws appendiculate.

Length, $3\frac{1}{2}$ —4 millim.

Head impunctate, clypeus separated from the face by a distinct transverse groove, broad, the anterior margin semicircularly emar-

ginate, the surface with a few fine punctures, labrum fulvous, mandibles piceous; antennæ extending beyond the middle of the elytra, fulvous, the apical five joints black, the second and third joints equal, as long as the first, but more slender; apical joints slightly thickened. Thorax twice as broad as long, the lateral margins feebly rounded, the anterior angles continued with the episternum below; surface impunctate or with a few minute punctures. Elytra broader at the base than the thorax, with a very shallow depression below the base, regularly and rather strongly punctate-striate anteriorly, the striæ widely separated, the punctures nearly obsolete near the apex, disc fulvous, the sides with a bluish fuscous or piceous band, which is not well defined at its inner margin and leaves the extreme lateral margin and the epipleuræ of the ground colour. Underside and legs fulvous, the latter unarmed, the posterior four tibiæ emarginate, claws appendiculate.

Hab. MAURITIUS, Carepipe.

On account of the equal length of the second and third joints of the antennæ and the appendiculate claws, I have placed this species in Harold's genus *Nossiaccus*, although in the type the femora are described as toothed. There are moreover only two or three other genera with appendiculate claws placed at present in the group of Typophorinæ, to which the present genus belongs, and none of these genera agrees in structural details with the species before me. It may perhaps require a new genus for its reception, if other forms of similar structure turn up. I may add that the prosternum in this species is broad and flat, and that Harold says nothing about the shape of this part in the description of his genus.

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